

Abstract

For synchronization purposes, a transmitter (TX) multiplexes a pilot carrier with carriers whereon data elements (DATA) are modulated, and transmits the pilot carrier together with the modulated carriers to a receiver (RX). The immunity of the pilot carrier for interferers, such as radio amateur signals, is improved by modulating the pilot carrier with a non-constant signal, for instance a random signal, an alternating signal or even scrambled data elements (DATA), before transmission thereof. Since demodulation of the pilot carrier in the receiver (RX) and averaging successive demodulated pilot carriers reduces the effect of the interference induced on the non-constantly modulated pilot carrier, the degradation of the synchronisation between transmitter (TX) and receiver (RX) is reduced significantly.

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